

REMARKS

These remarks are set forth in response to the non-final office action mailed February 9, 2005 (the "Office Action"). As this amendment has been timely filed within the three-month statutory period, neither an extension of time nor a fee is required. Presently, claims 1 through 13 are pending in the Patent Application of which claims 1, 6 and 10 are independent in nature. In paragraph 2 of the Office Action, the Examiner objected to the form of the disclosure due to a typographical error identified by the Examiner. In response, the Applicants have amended the specification to cure the noted error. In paragraphs 3 and 4 of the Office Action, the Examiner has rejected claims 7, 8, 11 and 12 under 35 U.S.C. § 112, paragraph 2 as lacking antecedent basis due to two typographical errors. Likewise, the Applicants have amended claims 7, 8, 11 and 12 to cure the typographical errors.

In paragraphs 6 through 12, claims 1, 2, 6, 7, 9, 10 and 11 have been rejected under 35 U.S.C. § 102(e) as being anticipated by United States Patent No. 6,408, 342 to Moore et al. (Moore). Also, in paragraphs 13 through 19, claims 3, 4, 5, 8 and 12 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Moore in view of United States Patent No. 6,782, 542 to Meia et al. (Meia). In response, the Applicants respectfully traverse the rejections on the art.

Prior to addressing further the rejections on the art, a brief review of the Applicants' invention is appropriate. The Applicants have invented a location transparent system for remotely invoking distributed object services. In the Applicants' invention, a meta-stub can provide a client view of a distributed object, for instance an Enterprise Java Bean (EJB). The meta-stub can be configured to interact with one or more specific stubs which are configured to

process client-server communications for a particular transport mechanism. In this way, the meta-stub can variably select a suitable transport mechanism according to the dynamically changing network conditions and the capabilities of individual servers hosting the distributed objects.

For instance, the meta-stub can be configured to interact with each of an RMI-IIOP stub, SOAP/HTTP stub, SOAP-SMTP and SOAP-JMS/MQ stub. In this example, the meta-stub can select an appropriate specific stub where the server hosting the distributed object supports the transport mechanism associated with the specific stub and where network conditions permit such communications. Importantly, the meta-stub can be configured to initially establish communications using a default specific stub, for example a SOAP/HTTP stub. Additionally, where the QoS associated with a selected transport mechanism falls below acceptable levels, the meta-stub can fail over to a transport mechanism associated with the default specific stub.

Turning now to the rejections on the art, Moore relates to a communication framework supporting multiple communications protocols. The communications framework includes a remote procedure call class providing an interface for an apply method. The apply method, in turn, references a remote object, an operation to be performed, and an argument list. The communications framework also includes at least one remote procedure call transport deriving from the remote procedure call class. Each remote procedure call transport provides an implementation for the apply method whose interface is provided by the remote procedure call class.

Notably, Moore teaches the use of a stub to implement a remote procedure call. Specifically, a client process can call the stub along with the identity of the target object and the

method in the target object to be invoked. The stub, in turn, can convert the call into a different form and forward the converted call to a remote transport. The remote transport subsequently can make the call on the target object. Importantly, however, the stub can select from among a set of remote transports each supporting a different transport protocol. For example, the stub can select a remote transport based upon the ability of the selected remote transport to support a specified quality of service (QoS).

Significantly, Moore does not teach the selection of a particular stub able to support a particular communications protocol from a meta-stub supporting a default communications protocol. Rather, Moore teaches the use of a single stub selecting a single communications protocol before establishing communications with the target object. Once the remote transport has been selected in Moore, communications still flow through the original stub (as there is only a single stub) while utilizing a particular remote transport. In the Applicants' invention, however, the meta-stub is used to establish the default communicative link with the target object using a default communications protocol. Subsequently, a new communicative link can be re-established using a different stub to support a different communications protocol.

Both of the foregoing distinctions are recited in the independent claims. For example, claim 1 recites a "meta-stub configured to select individual ones of said RPC transport protocol stubs". The concept of a meta-stub configured to select other stubs is wholly lacking in Moore. As another example, claim 6 recites "establishing a communicative link with said distributed object using a default RPC transport mechanism" and "re-establishing said communicative link with said distributed object using said selected RPC transport mechanism". Again, Moore

teaches the establishment of a single communicative link. Never in Moore is a default link supplanted by a re-established link.

Mein has been cited to teach specifically claimed protocol stubs such as SOAP/HTTP. Mein, however, cannot cure the deficiencies of Moore in that neither Mein, nor Moore, nor their combination teaches either intra-stub communications or the re-establishment of a default link using a specific transport protocol. Accordingly, just as Moore does not teach each and every limitation recited in claims 1, 2, 6, 7, 9, 10, 11 and 13, the combination of Moore and Mein does not teach each and every limitation recited in claims 3, 4, 5, 8 and 12. Accordingly, the Applicants respectfully request the withdrawal of all rejections on the art based upon Moore and Mein.

The Applicants believe that the amended claims 1 through 13 distinguish over the cited art and stand patentable and ready for an indication of allowance. To that end, the Applicant respectfully requests the withdrawal of the rejections under 35 U.S.C. §§ 102(e), 103(a) and 112 second paragraph based upon the Applicants' amendments to the claims, and owing to the foregoing remarks. This entire application is now believed to be in condition for allowance. Consequently, such action is respectfully requested. The Applicants request that the Examiner call the undersigned if clarification is needed on any matter within this Amendment, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion.

Reply Under 37 C.F.R. §1.111

Group Art Unit : 2126

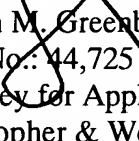
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Respectfully submitted,

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